OUTLINE

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1. Claims Rejection Under 35 USC Section 102, Paragraphs 2 and 3 of the Second Office Action

The Examiner presently rejects claims 1 and 7 through 15 under 35 USC Section 102(b) ("anticipation") over US Patent No. 5497918 (hereinafter "the '918 reference" or "Brilanchik"). The Examiner has been kind enough to discuss the nature of the '918 patent with applicant's counsel by telephone.

At that time, the Examiner argued that the liquid heat exchanger of the '918 reference constituted a "thermoelectric" heat exchanger. The applicant very respectfully pointed out and still points out that the liquid-to-liquid device of the '918 reference is not under any mechanical

or legal definition a "thermoelectric" heat exchanger.

In order to facilitate understanding of the present matter, the applicant will very respectfully discuss the nature of the various devices under and discussion the definitions used in patent prosecution.

1a. The Present Invention

The present invention teaches and claims the use of a thermoelectric liquid heat exchanger mounted in the structure of the vehicle so as to not take up any space in the passenger compartment. (Claim 1, Response of June, 2005, Specification as amended, Specification as originally filed). A liquid dispenser may have a first position out of the vehicle dashboard so as to allow dispensing of liquid and may have a second position when not in use. Liquid conduits and reservoirs may be provided within the structure of the vehicle. (Claim 1, Specification).

The use of a thermoelectric liquid heat exchanger is believed to be unique to the invention. In particular, the typical thermoelectric heat exchanger commonly seen in actual use is mounted in a camping cooler which may be carried within the passenger compartment of a vehicle and plugged into the 12VDC outlet ("cigarette lighter") of the vehicle. This type of thermoelectric heat exchanger is usually small and light in order to be easily carried in a typical camping cooler and is furthermore not a liquid heat exchanger, as it uses air passing across the thermoelectric device for cooling on both sides of the temperature differential. The applicant believes that a thermoelectric device carried (and concealed) within the structure of the vehicle may be advantageous as it can be larger and thus more powerful and in addition, it may be made specifically to cool liquids, with a thermoelectric heat exchanger having a liquid conduit passing

across the thermoelectric element. (In early testing, the applicant used an ordinary thermoelectric heat exchanger and provided it with liquid conduits passing repeatedly across the cooling/heating fins of the heat exchanger in order to create the first thermoelectric liquid heat exchanger of which the applicant is aware.) Reference to the fact that this is a thermoelectric liquid heat exchanger rather than an ordinary liquid heat exchanger may be found on page 13 of the Specification as originally filed, lines 18 through 21.

The lists recited in the previous Response point out the various features of the present invention not found in the prior art, and are incorporated by reference into this Response in order to avoid prolixity. Other structures may be discussed by the applicant at a later date, but in the interests of speeding prosecution, the structures recited to date should be sufficient to differentiate over the prior art. However, a more fundamental point has emerged which requires adjudication between the Examiner and the applicant. In particular, the Examiner maintains that a "thermoelectric heat exchanger" can mean a device which has electrical control circuitry and a liquid-to-liquid heat exchange element such as a heater core or radiator type device.

2a. The Peltier-Seebeck Thermoelectric Effect

Recourse to Wikipedia Encyclopedia, (www.wikipedia.com) provides an easily accessible definition of thermoelectricity and related effects.

> Thermoelectricity is the conversion from heat differentials to electricity or vice versa. It is accomplished in one of several ways:
>
> 1. The Peltier-Seebeck effect

2. Thermionic emission

3. Indirectly through magnetohydrodynamics (see Rubidium).

This definition already makes clear that an ordinary heat exchanger such as a liquid-to-liquid heat exchanger, a vehicle heater core, a car radiator or the like does not constitute an example of thermoelectricity, as a liquid-to-liquid heat exchanger does not either transform electricity into a temperature differential, nor does a liquid-to-liquid heat exchanger transform a temperature differential into electricity.

The complete Wikipedia Encyclopedia entry on the Peltier-Seebeck effect is attached to this document as Exhibit A. In summary, a pair of metals or semi-conductors having different Seebeck coefficients may be attached to form a circuit which will develop an electrical current in the presence of a temperature differential. In the alternative, the same materials may be subjected to an electrical current, in which case the materials will create a temperature differential. The temperature differential may be considered to be either heating or cooling, depending upon the side of the circuit used.

1c The '918 reference

The '918 reference ("Brilanchik") does not teach any thermoelectric device of any type. It teaches a liquid-to-liquid heat exchanger which uses the liquids of the vehicle engine to provide heating or cooling of the drink of the user. Liquids such as R-134 (air conditioner coolant) or ethylene glycol (engine coolant) may be used in the '918 reference heat exchanger. (See for example col. 5 lines 1 through 15).

Sheet 4 of the '918 reference has Figs. 4, 5, 6, 7a, and 7b, and the text referring to them (col. 6 lines 18 et seq.) provide an excellent explanation of the heat exchanger of the '918 reference device. Cylinder 41 has on the outside a heat exchanger coil 42. Coil 42 carries within it the heat exchanger fluid from the vehicle mechanical systems. On the inside of cylinder 41, the "drink" (col. 6 line 31) is heated by direct heat exchange from the fluid in the coils on the outside of the cylinder. The applicant believes that this system is powerful but does involve the risk of cross contamination from the engine coolant or refrigerant to the drink.

It will be seen that this system offers no conversion of electricity to heat differentials nor vice versa and thus does not meet the encyclopedia definition of "thermoelectricity". In discussions between the Examiner and applicant's attorney, the Examiner pointed to control circuitry such as that shown in Fig. 8 and Fig. 10 of the '918 reference and argued that such control circuitry of the liquid-to-liquid heat exchanger made the '918 reference thermoelectric. The applicant very respectfully disagrees with this line of reasoning. The presence of electrical control circuitry does not make an ordinary liquid-to-liquid heat exchange core into a thermoelectric heat exchanger any more than the presence of electrical control systems in an automobile makes an ordinary gasoline engine into a gas-electric hybrid vehicle.

This leads naturally to the issue of the meaning of claim language.

1d. Legal Standards and Claim Language

It is well established that "When an applicant states the meaning that claim terms are intended to have, the claims should be examined with that meaning, in order to achieve a complete exploration of the applicant's invention and its relation to the prior art." (In re Zletz,

893 F. 2d 319, 321, 13 USPQ 2d 1320 ,1322 (Fed. Cir. 1989).

The applicant repeatedly stated that the device of the invention uses a thermoelectric liquid heat exchanger. Repetition of the phrase may be found throughout the Specification. In Figure 2, a thermoelectric heat exchange element may be seen with two wires labeled plus and minus to indicate electrical polarity in a DC electrical system and heat exchange fins. Throughout the application as originally filed, distinctions are drawn between thermoelectric devices such as are claimed and other types of heat exchangers. For example:

> US Patent No. 6460361 issued Oct. 8, 2002 to Faria for VEHICLE BEVERAGE DISPENSER is an item that teaches a fountain on the dashboard of the vehicle. However, it uses air conditioning coolant, not thermoelectric means, and thus teaches away from devices using thermoelectric cooling and heating. Numerous patents make the choice to use engine liquids such as air conditioning coolant (R-134a, FREON, ethylene glycol) due to the great amounts of energy which an automobile engine can produce when compared to electrical systems. (Specification, page 3, lines 12 through 17).

Another and broader statement of proper claim meaning is the "consistent with the dictionary" test: "Words in a claim 'will be given their ordinary and accustomed meaning, unless it appears that the inventor used them differently.' Envirotech Corp. v. Al George, Inc. 730 F. 2d 753, 759, 221 USPQ 473, 477 (Fed. Cir. 1984); Jonsson v. Stanley Works 903 F. 2d 812, 14 USPQ 2d 1863, 1871 (Fed. Cir. 1990). The encyclopedia definition offered previously, from

Wikipedia Encyclopedia, is being referenced by the applicant to aid in explanation of the thermoelectric effect. This should show that the applicant is giving the terminology "thermoelectric" its "ordinary and accustomed" meaning.

Thus, while the Examiner may legally operate within the definitions of dictionary and application, the Examiner is not free to offer his own interpretations of clear claim language.

For this reason, the use of the '918 reference in "anticipation" of the present invention is improper, and the applicant respectfully urges that claims 1 and 7 through 15 of the application are in condition for immediate allowance, and such action is respectfully requested.

2. Claims Rejection Under 35 USC Section 102, Paragraphs 2 and 3 of the Second Office Action

The Examiner presently rejects claims 2 through 6 under 35 USC Section 103(a) ("non-obviousness") over a combination of US Patent No. 6065939 (hereinafter "the '939 reference") and US Patent No. 5497918 (hereinafter "the '918 reference"). The Examiner has previously rejected claims 2 through 6 under 35 USC Section 103(a) over a triple combination of the '939 reference, the '918 reference, and US Patent No. 6070927 (hereinafter "the 927 reference"), and has previously rejected claims 1 and 7 through 15 over the sub-combination of references consisting of the '939 reference and the '918 reference. In order to simplify prosecution, the applicant will respectfully consider both the entire triple combination against claim 1 as amended 06/28/2005, as well as considering the '918 and '939 combination against claim 1 and claims 2 through 6, thus taking in all possible combinations as well as the most recently cited

combination. Previous arguments to the same end are incorporated herein by reference to the earlier responses.

2a. Legal standards regarding combinations of references

In order to combine references, certain conditions must be met. These conditions are not met by any combination including the '918 reference, because the '918 reference teaches away from thermoelectric heaters. At the risk of prolixity, the applicant will respectfully repeat the following. "A reference may be said to teach away when a person of ordinary skill, upon reading the reference . . . would be led in a direction divergent from the path that the applicant took." *In re Gurley*, 27 F.3d 551, 31 USPQ 2d 1130, 1131 (Fed. Cir. 1994). The '918 reference clearly teaches away from the use of thermoelectric heaters by teaching towards the use of a liquid-to-liquid heat exchanger lacking any device which translates electricity into a heat differential.

The '918 reference teaches away from thermoelectric heaters or coolers and also there must be some suggestion in the art to make the combination. There is no suggestion in the '918 reference that it be combined with the '939 reference or any other resistance electric heating device or any thermoelectric device. "Absent such reasons or incentives, the teachings of the references are not combinable." *Scripps Clinic & Research Foundation v. Genentech Incorporated,* 927 F.2d 1565, 1577, 18 USPQ 2d 1001, 1010 (Fed. Cir. 1991).

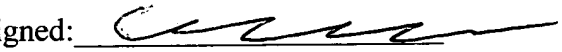
In addition, a substantial list of features previously alluded to (See First Response dated 06/28/2005) remain absent from the combination. To avoid prolixity, the applicant will refrain from repeating that recitation in full and will merely incorporate those comments herein by reference and an abbreviated list: "a thermoelectric liquid heat exchanger disposed in such

structure of such vehicle", and a "liquid dispenser has a second position concealing the liquid dispenser within such vehicle dashboard." Thus claim 2 and all claims dependent therefrom are allowable and such action is earnest requested.

(The Examiner may choose to recite the '927 reference, which teaches a cup holder which hangs suspended inside a "glove box" or "dash compartment". Air from the vehicle's air conditioning or ventilation system is passed through the glove box to cool the beverage, and thus this device lacks a thermoelectric heater, teaches away from a thermoelectric heater by teaching a different system, and lacks suggestion to combine with a thermoelectric heater.)

Conclusion, Paragraph 6 of the First Office Action

For all the foregoing reasons, applicant respectfully urges that the application is now in condition for immediate allowance, and such action is requested. The Examiner is respectfully urged to contact applicant's counsel, Craig W. Barber, PO Box 16220, Golden, Colorado, 80402-6004, 303-278-9973, fax 303-278-9977, with any questions or comments.

Signed: 

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